


**TRANSMITTAL**

Electronic Version v1.1

Stylesheet Version v1.1.0

Title of Invention	System and Method for Joint Maximal Ratio Combining Using Time Domain Based Signal Processing	
Application Number: 10/707588 		
Date: 2003-12-23		
First Named Applicant: Mr. Yohannes Tesfai		
Confirmation Number: 1587		
Attorney Docket Number: Cognio38US2		
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Submitted by:	Elec. Sign.	Sign. Capacity
Mr. Andrew Floam Registered Number: 34597	/daf/	Agent
Documents being submitted us-ids	Files IDS1-usidst.xml us-ids.dtd us-ids.xsl	
Comments		



ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of
Invention

System and Method for Joint Maximal Ratio Combining
Using Time Domain Based Signal Processing

Application Number: 10/707588



Confirmation Number: 1587

First Named Applicant: Yohannes Tesfai

Attorney Docket Number: Cognio38US2

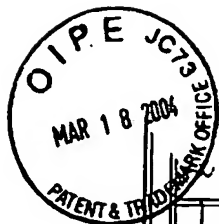
Art Unit: 2634

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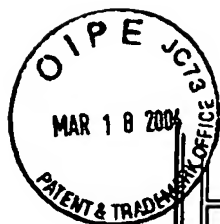
US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

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	4	6369758	2002-04-09	Zhang	B1	342	383
	5	6037898	2000-03-14	Parish et al		342	174
	6	5437055	1995-07-25	Wheatley, III		455	33.3
	7	5507035	1996-04-09	Bantz et al		455	133
	8	4599734	1986-07-08	Yamamoto		375	40
	9	5491723	1996-02-13	Diepstraten		375	267
	10	5394435	1995-02-28	Weerackody		375	206
	11	4639914	1987-01-27	Winters		370	110
	12	6157340	2000-12-05	Xu et al		342	174
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	14	6122260	2000-09-19	Liu et al		370	280
	15	6195045	2001-02-27	Xu et al	B1	342	368
	16	6147985	2000-11-14	Bar-David et al			
	17	6044120	2000-03-28	Bar-David et al			
	18	6038272	2000-03-14	Golden et al			
	19	6349219	2002-02-19	Hochwald et al			
	20	6327310	2001-12-04	Hochwald et al			
	21	6307882	2001-10-23	Marzetta			
	22	6058105	2000-05-02	Hochwald et al			
	23	6442214	2002-08-27	Boleskei et al			
	24	6144711	2000-11-07	Raleigh et al			
	25	6317466	2001-11-13	Foschini et al			
	26	6097771	2000-08-01	Foschini			
	27	6377631	2002-04-23	Raleigh			
	28	6298092	2002-10-02	Heath, Jr.			
	29	6377636	2002-04-23	Paulraj et al			
	30	6351499	2002-02-26	Paulraj et al			
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	32	5610617	1997-03-11	Gans et al			
	33	6252548	2001-06-26	Jeon			
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	35	6211671	2001-04-03	Shattil			
	36	6008760	1999-12-28	Shattil			
	37	6370182	2002-04-09	Bierly et al.			
V	38	6362781	2002-03-26	Thomas et al.			



39	6377819	2002-04-23	Gesbert et al.			
40	6400780	2002-06-04	Rashid-Farrokh et al.			
41	6331837	2001-12-18	Shattil			
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US Published Applications

Note: Applicant is not required to submit a paper copy of cited US Published Applications

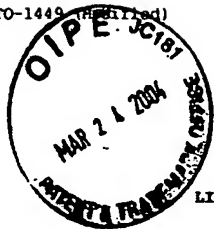
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	13	20020159537	2002-10-31	Crilly, Jr.			
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	15	20020067309	2002-06-06	Baker et al			
	16	20020127978	2002-09-12	Khatri			
	17	20020085643	2002-07-04	Kitchner et al			
	18	20020118781	2002-08-29	Thomas et al			
	19	20020122383	2002-09-05	Wu et al			
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Signature

Examiner Name	Date
<i>Sophia Vlahos</i>	6/15/2007



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LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.: Cognio38US2
 SERIAL NO.: 10/707,588
 APPLICANT(S): Tesfai et al.

GROUP ART UNIT: 2634
 FILING DATE: December 23, 2003
 TODAY'S DATE: March 23, 2004

FOREIGN PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Country	Class/Subclass	Translation (Yes or No)
SV AA	WO 02/03568	1/10/2002	PCT		
SV AB	WO 01/45300	6/21/2002	PCT		

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

*Examiner Initial	Author, Title, Date, Pertinent Pages, Etc
SV BA	Bablan et al., "Optimum Diversity Combining and Equalization in Digital Data Transmission with Applications to Cellular Mobile Radio-PartII: Numerical Results", May 1992, IEEE Transactions on Communications, Vol. 30, No. 5, Pgs. 895-907
BB	Chuah et al., "Capacity of Multi-Antenna Array Systems in Indoor Wireless Environment", November 1998, IEEE Globecom
BC	Wallace et al., "Experimental Characterization of the MIMO Wireless Channel: Data Acquisition and Analysis", February 27, 2002, Department of Electrical and Computer Engineering, Brigham Young University
BD	Love et al., "Equal Gain Transmission in Multiple-Input Multiple-Output Wireless Systems", November 2002, Proceedings of IEEE Globecom, pgs. 1124-1128
BE	Vaidyanathan et al., "The Role of Lossless Systems in Modern Digital Signal Processing: A Tutorial," IEEE Transactions on Education, Vol. 32, August 1989, pp. 181-197.
BF	Raleigh et al., "Spatio-Temporal Coding for Wireless Communication," IEEE Transactions on Communications, Vol 46., No. 3, March 1998, pp. 357-366.
BG	Jungnickel et al., "Performance of a MIMO System with Overlay Pilots," IEEE GlobeCom 2001, pp. 594-598.
BH	BLAST High-Level Overview, Lucent Technologies, July 18, 2000
BI	Golden et al., "Detection Algorithm and Initial Laboratory Results Using V-BLAST space-time communication architecture," Electronic Letters, January 7, 1999, vol. 35, No. 1.



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SV	BJ	Golden et al., "V-BLAST: A High Capacity Space-Time Architecture for the Rich-Scattering Wireless Channel," Bell Laboratories, Lucent Technologies, Proc. Int'l Symposium on Advanced Radio Technologies, Boulder, CO, September 10, 1998.
	BK	Wolniansky et al., "V-BLAST: An Architecture for Realizing Very High Data Rates Over the Rich-Scattering Wireless Channel," Proc. ISSSE-98, Pisa, Italy, Sept. 29, 1998.
	BL	Chizhik et al., "Keyholes, Correlations, and Capacities of Multielement Transmit and Receiver Antennas," IEEE Transactions on Wireless Communications, Vol. 1, No. 2, April 2002, pp. 361-368.
	BM	Junqiang et al., "Spatial Multiuser Access with MIMO Smart Antennas for OFDM Systems," IEEE VTC '2001, September, 2001, pp. 1553-1557.
	BN	Stridh et al., "MIMO Channel Capacity on a Measured Indoor Radio Channel at 5.8 GHz," Proc. Of the Asilomar Conf. on Signals, Systems & Computers, Vol. 1, October, 2000, pp. 733-737.
	BO	Jungnickel et al., "A MIMO WLAN Based on Linear Channel Inversion," IEE Seminar-MIMO Communication Systems from Concept to Implementation, December, 2001, pp. 20/1-20/6.
	BP	Stridh et al., "Spatial Characterization of Indoor Radio Channel Measurements at 5 GHz," SAM '2000, March, 2000, pp. 58-62.
	BQ	Irner, Ralf et al., "MISO Concepts for Frequency-Selective Channels," 2002 International Zurich Seminar on Broadband Communications Access, February 19-21, 2002.
	BR	Choi, Ruly Lai-U et al., "MISO CDMA Transmission with Simplified Receiver for Wireless Communication Handsets," IEEE Transactions on Communications, Vol. 49, No. 5, May, 2002.
	BS	Meyer-Ottens, Sven et al., "Downlink Beamforming for W-CDMA Using Feedback and Interference Estimate," March 9, 2001.
	BT	Brunner, Christopher et al., "Downlink Beamforming for WCDMA Based on Uplink Channel Parameters," Proc. EPMCC 1999, pages 375-380, March 1999.
	BU	Yang, Jian et al., "On Joint Transmitter and Receive Optimization for Multiple-Input-Multiple-Output (MIMO) Transmission Systems," IEEE Transactions on Communications, Vol. 42, No. 12, December, 1994.
	BV	Ivrlac, Michel et al., "On Channel Capacity of Correlated MIMO Channels," ITG Fokusprojekt: Mobilkommunikation "Systeme mit intelligenten Antennen", Ilmenau, 2001.
	BW	Iserte, Antonio Pascual et al., "Pre-and Post-Beamforming in MIMO Channels Applied to HIPERLAN/2 and OFDM," IST Summit 2001 (IST Mobile Communications Summit), September, 2001.
✓	BX	Iserte, Antonio Pascual et al., "Joint Beamforming Strategies in OFDM-MIMO Systems," ICASSP 2002 (IEEE International Conference on Acoustics, Speech and Signal Processing), May, 2002.

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CV	BY	Lee, Dennis et al., "Antenna Diversity for an OFDM System in a Fading Channel," Proceeding of IEEE MILCOM 1999, November, 1999, pages 1104-1109.
	BZ	Jakes, William C., "Microwave Mobile Communications," Copyright 1974, pages 313-320 and 489-498.
	CA	Yeh, Y.S., "An Analysis of Adaptive Retransmission Arrays in a Fading Environment," The Bell System Technical Journal, October, 1970, pages 1811-1825.
	CB	Morgan, Samuel P., "Interaction of Adaptive Antenna Arrays in an Arbitrary Environment," The Bell System Technical Journal, January, 1965, pages 23-47.
	CC	Aziz, Abdul M.K. et al., "Indoor Throughput and Range Improvements using Standard Compliant AP Antenna Diversity in IEEE 802.11a and ETSI HIPERLAN/2," Vehicular Technology Conference, 2002, VTC 2001, October 7-11, 2001, IEEE VTS 54 th , Volume 4, pages 2294-2298.
	CD	Iserte, Antonio Pascual et al., "Iterative Algorithm for the Estimation of Distributed Sources Localization Parameters," SSP 2001 (11 th IEEE Workshop on Statistical Signal Processing), August, 2001.
	CE	Heath, Robert W., Jr., "A Simple Scheme for Transmit Diversity Using Partial Channel Feedback," Signals, Systems & Computers, Conference Record of the Thirty-Second Asilomar Conference November 1-4, 1998, Vol. 2, pages 1073 - 1078.
	CF	"Lucent's 'BLAST' chips to Take Off in Wireless Market," October 16, 2002, Semiconductor Business News.
	CG	"Lucent Technologies' Chips Poised to Bring 'BLAST' Multiple Input/Multiple Output Technology to Laptops, PDA's and Other Mobile Devices," October 16, 2002, Lucent Technologies.

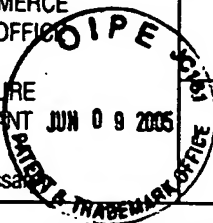
EXAMINER

Sophia Vlahos

DATE CONSIDERED

1 6/15/2007

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s)

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	4,599,734	07/1986	Yamamoto				
	4,639,914	01/1987	Winters				
	5,274,844	12/1993	Harrison et al.				
	5,394,435	02/1995	Weerackody				
	5,437,055	07/1995	Wheatley, III				
	5,457,808	10/1995	Osawa et al.				
	5,491,723	02/1996	Diepstraten				
	5,493,307	02/1996	Tsujiimoto				
	5,507,035	04/1996	Bantz et al.				
	5,539,832	07/1999	Weinstein et al.				
	5,570,366	10/1996	Baker et al.				
	5,577,265	11/1996	Wheatley, III				
	5,610,617	03/1997	Gans et al.				
	5,752,173	05/1998	Tsujiimoto				
	5,761,193	06/1998	Derango et al.				
	5,761,237	06/1998	Petersen et al.				
	5,812,531	09/1998	Cheung et al.				
	5,848,105	12/1998	Gardner et al.				
	5,898,679	04/1999	Brederveld et al.				
	5,912,921	06/1999	Warren et al.				
	5,930,248	07/1999	Langlet et al.				
	5,982,327	11/1999	Vook et al.				
	6,008,760	12/1999	Shattil				
	6,023,625	02/2002	Myers Jr.				
	6,037,898	03/2000	Parish et al.				
	6,038,272	03/2000	Golden				
V	6,044,120	03/2000	Bar-David et al.				
EXAMINER <i>Sophia Vlahos</i>				DATE CONSIDERED 6/15/2007			

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		6,091,934	07/2000	Berman et al.			
		6,097,771	08/2000	Foschini			
		6,118,788	09/2000	Kermani			
		6,122,260	09/2000	Liu et al.			
		6,124,824	09/2000	Xu et al.			
		6,141,393	10/2000	Thomas et al.			
		6,141,567	10/2000	Youssefmir et al.			
		6,144,651	11/2000	Rinchiuso et al.			
		6,144,711	11/2000	Raleigh et al.			
		6,147,985	11/2000	Bar-David et al.			
		6,157,340	12/2000	Xu et al.			
		6,157,843	12/2000	Derango et al.			
		6,177,906	01/2001	Petrus			
		6,185,440	02/2001	Barratt et al.			
		6,195,045	02/2001	Xu et al.			
		6,211,671	04/2001	Shattil			
		6,252,548	06/2001	Jeon			
		6,252,884	06/2001	Hunter			
		6,266,528	07/2001	Farzaneh			
		6,295,026	09/2001	Chen et al.			
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		6,307,882	10/2001	Marzetta			
		6,317,466	11/2001	Foschini et al.			
		6,327,310	12/2001	Hochwald et al.			

EXAMINER <i>Sophia Vleder</i>	DATE CONSIDERED 6/15/2007
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	6,349,219	02/2002	Hochwald et al.				
	6,351,499	02/2002	Paulraj et al.				
	6,362,781	03/2002	Thomas et al.				
	6,369,758	04/2002	Zhang				
	6,370,182	04/2002	Bierly et al.				
	6,377,631	04/2002	Raleigh				
	6,377,636	04/2002	Paulraj et al.				
	6,377,819	04/2002	Gesbert et al.				
	6,400,699	06/2002	Airy et al.				
	6,400,780	06/2002	Rashid-Farrokhhi et al.				
	6,442,214	08/2002	Boleskei et al.				
	• 6,462,709	10/2002	Choi				
	• 6,463,295	10/2002	Yun				
	6,473,467	10/2002	Wallace et al.				
	• 6,522,898	02/2003	Kohno et al.				
	• 6,549,786	04/2003	Cheung				
	• 6,570,929	05/2003	Eriksson				
	• 6,584,161	06/2003	Hottinen				
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	• 6,684,064	01/2004	Kazakevich et al.				
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	2001/0012764	08/2001	Edwards et al.				
	2001/0015994	08/2001	Nam				
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U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)				APPLICANT Tesfai et al.			
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		2002/0001316	01/2002	Homsby et al.			
		2002/0024975	02/2002	Handler			
		2002/0034191	03/2002	Shattil			
		2002/0039884	04/2002	Raynes et al.			
		2002/0064246	05/2002	Kelkar et al.			
		2002/0067309	06/2002	Baker et al.			
		2002/0072392	06/2002	Awater et al.			
		2002/0085643	07/2002	Kitchener et al.			
		2002/0102950	08/2002	Gore et al.			
		2002/0111142	08/2002	Klimovitch			
		2002/0118781	08/2002	Thomas et al.			
		2002/0122383	09/2002	Wu et al.			
		2002/0122501	09/2002	Awater et al.			
		2002/0127978	09/2002	Khatri			
		2002/0136170	09/2002	Struhsaker			
		2002/0141355	10/2002	Struhsaker et al.			
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		2002/0158801	10/2002	Crilly, Jr. et al.			
		2002/0159537	10/2002	Crilly, Jr.			
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EXAMINER <i>Sophia V. Hov</i>	DATE CONSIDERED <i>6/15/2007</i>
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FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)				ATTY. DOCKET NO. COG-2-0980.02.US		SERIAL NO. 10/707,588	
				APPLICANT Tesfai et al.			
				FILING DATE December 23, 2003		GROUP 2634	

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
SV		2003/0108117	06/2003	Ketchum et al.			
	*	2003/0114108	06/2003	Frecassetti et al.			
		2003/0125090	07/2003	Zeira			
		2003/0139194	07/2003	Onggosanusi et al.			
	*	2003/0181165	09/2003	Sugar et al.			
	**	2004/0013212	01/2004	Benesty et al.			
	*	2004/0072546	04/2004	Sugar et al.			

FOREIGN PATENT DOCUMENTS								
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
SV		01/45300	06/2001	WO				
SV		02/03568	01/2002	WO				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
SV	Iserte et al., "Pre-and Post-Beamforming in MIMO Channels Applied to HIPERLAN/2 and OFDM", IST Summit 2001, IST Mobile Communications Summit, September 2001.
	Iserte et al., "Joint Beamforming Strategies in OFDM-MIMO Systems", ICASSP 2002, IEEE International Conference on Acoustics, Speech and Signal Processing, May 2002.
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V	Jakes, "Microwave Mobile Communications", Copyright 1974, pp. 313-320 and pp. 489-498.

EXAMINER <i>Sophia Vlah...</i>	DATE CONSIDERED 6/15/2007
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U.S. PATENT DOCUMENTS

[illegible]

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

SV	Briesemeister et al., "Role-Based Multicast in Highly Mobile but Sparsely Connect Ad-Hoc Networks"; First Annual Workshop on Mobile Ad Hoc Networking & Computing; pp. 45-50; August 2000.
	Bablan et al., "Optimum Diversity Combining and Equalization in Digital Data Transmission with Applications to Cellular Mobile Radio-Part II: Numerical Results"; May 1992; IEEE Transactions on Communications, vol. 30, No. 5; pp. 895-907.
	Brunner et al., "Downlink Beamforming for WCDMA Based on Uplink Channel Parameters"; Proceedings of 3rd European Personal Mobile Conference (EPMCC '99), March 1999, pp. 375-380.
	Yeh, "An Analysis of Adaptive Retransmission Arrays in a Fading Environment", The Bell System Technical Journal, October 1970, pp. 1811-1825.
	Morgan, "Interaction of Adaptive Antenna Arrays in an Arbitrary Environment", The Bell System Technical Journal, January 1965, pp. 23-47.
	Stridh et al., "MIMO Channel Capacity on a Measured Indoor Radio Channel at 5.8 GHz", Proc. of the Asilomar Conf. on Signals, Systems & Computers, Vol. 1, October 2000, pp. 733-737.

EXAMINER Sandra V. [Signature]	DATE CONSIDERED 6/15/2017
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		Iserte et al., "Iterative Algorithm for the Estimation of Distributed Sources Localization Parameters", SSP 2001, 11 th IEEE Workshop on Statistical Signal Processing, August 2001.	
		Vaidyanathan et al., "The Role In Lossless Systems in Modern Digital Signal Processing: A Tutorial", IEEE Transactions on Education, Vol. 32, August 1989, pp. 181-197.	
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		Junqiang et al., "Spatial Multiuser Access with MIMO Smart Antennas for OFDM Systems", IEEE VTC 2001, September 2001, pp. 1553-1557.	

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		Stridh et al., "Spatial Characterization of Indoor Radio Channel Measurements at 5 GHz", SAM 2000, March 2000, pp. 58-62.	
		Irmr et al., "MISO Concepts for Frequency-Selective Channels", 2002 International Zurich Seminar on Broadband Communications Access, February 19-21, 2002.	
		Choi et al., "MISO CDMA Transmission with Simplified Receiver for Wireless Communication Handsets", IEEE Transactions on Communications, Vol. 49, No. 5, May 2002.	
		Meyer-Ottens, et al. "Downlink Beamforming for W-CDMA Using Feedback and Interference Estimate", March 9, 2001.	
		Yang et al., "On Joint Transmitter and Receive Optimization for Multiple-Input-Multiple-Output (MIMO) Transmission Systems", IEEE Transactions on Communications, Vol. 42, No. 12, December 1994.	
		Ivrlac et al., "On Channel Capacity of Correlated MIMO Channels", ITG Fokusprojekt: Mobilkommunikation "Systeme mit Intelligenten Antennen", Ilmenau, 2001.	
		Chuah et al., "Capacity of Multi-Antenna Array Systems in Indoor Wireless Environment", November 1998, IEEE Globecom.	
		Wallace et al., "Experimental Characterization of the MIMO Wireless Channel: Data Acquisition and Analysis", February 27, 2002, Department of Electrical and Computer Engineering, Brigham Young University.	
		Love et al., "Equal Gain Transmission in Multiple-Input Multiple-Output Wireless Systems", November 2002, Proceedings of IEEE Globecom, pp. 1124-1128.	

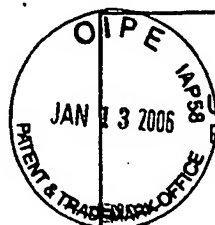
EXAMINER <i>Sophie Ulat</i>	DATE CONSIDERED 6/15/2007
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5		Lucent Technologies, "Lucent Technologies: Chips Poised to Bring 'BLAST' Multiple Input/Multiple Output Technology to Laptops, PDAs and Other Mobile Devices", October 16, 2002, lucent.com.	
		"Lucent's 'BLAST' Chips to Take Off in Wireless Market", EETimes.com, October 16, 2002.	
		Heath et al., "A Simple Scheme for Transmit Diversity Using Partial Channel Feedback", Signals, Systems & Computers, Conference Record of the Thirty-Second Asilomar Conference, November 1-4, 1998; vol. 2; pp. 1073-1078.	
	*	Chiu et al., "OFDM Receiver Design", EE225C, Fall 2000, University of California, Berkeley.	
		Wolniansky et al., "V-BLAST: An Architecture for Realizing Very High Data Rates Over the Rich-Scattering Wireless Channel", Proc. ISSSE-98, Pisa, Italy, September 29, 1998.	
	.	Sanchez et al., "CSMA/CA Beam Forming Antennas in Multi-hop Packet Radio"; Proc. For Swedish Workshop on Wireless Ad-Hoc Networks, March 5-6, 2001.	

EXAMINER Sophia Williams	DATE CONSIDERED 6/15/2001
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FORM PTO-1449

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PATENT AND TRADEMARK OFFICEINFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)

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COG-2-0980.02.USSERIAL NO.
10/707,588APPLICANT
Tesfai et alFILING DATE
December 23, 2003GROUP
2634

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
SV	4,121,221	10/1978	Meadows			
	4,599,734	07/1986	Yamamoto			
	4,639,914	01/1987	Winters			
	5,274,844	12/1993	Harrison et al.			
	5,394,435	02/1995	Weerackody			
	5,437,055	07/1995	Wheatley, III			
	5,457,808	10/1995	Osawa et al.			
	5,491,723	02/1996	Diepstraten			
	5,493,307	02/1996	Tsujimoto			
	5,507,035	04/1996	Bantz et al.			
	5,539,832	07/1999	Weinstein et al.			
	5,570,366	10/1996	Baker et al.			
	5,577,265	11/1996	Wheatley, III			
	5,610,617	03/1997	Gans et al.			
	5,752,173	05/1998	Tsujimoto			
	5,761,193	06/1998	Derango et al.			
	5,761,237	06/1998	Petersen et al.			
	5,812,531	09/1998	Cheung et al.			
	5,848,105	12/1998	Gardner et al.			
	5,898,679	04/1999	Brederveld et al.			
	5,912,921	06/1999	Warren et al.			
	5,930,248	07/1999	Langlet et al.			
	5,982,327	11/1999	Vook et al.			
	6,008,760	12/1999	Shatill			
	6,023,625	02/2002	Myers Jr.			
	6,037,898	03/2000	Parish et al.			
	6,038,272	03/2000	Golden			
	6,044,120	03/2000	Bar-David et al.			

EXAMINER

Sophia Vlahos

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SV	6,058,105	05/2000	Hochwald et al.				
	6,091,934	07/2000	Berman et al.				
	6,097,771	08/2000	Foschini				
	6,118,788	09/2000	Kermani				
	6,122,260	09/2000	Liu et al.				
	6,124,824	09/2000	Xu et al.				
	6,141,393	10/2000	Thomas et al.				
	6,141,567	10/2000	Youssefmir et al.				
	6,144,651	11/2000	Rinchiuso et al.				
	6,144,711	11/2000	Raleigh et al.				
	6,147,985	11/2000	Bar-David et al.				
	6,157,340	12/2000	Xu et al.				
	6,157,843	12/2000	Derango et al.				
	6,177,906	01/2001	Petrus				
	6,185,440	02/2001	Barratt et al.				
	6,195,045	02/2001	Xu et al.				
	6,211,671	04/2001	Shattil				
	6,252,548	06/2001	Jeon				
	6,252,884	06/2001	Hunter				
	6,266,528	07/2001	Farzaneh				
	6,295,026	09/2001	Chen et al.				
	6,298,092	10/2001	Heath, Jr.				
	6,307,882	10/2001	Marzetta				
	6,317,466	11/2001	Foschini et al.				
V	6,327,310	12/2001	Hochwald et al.				

EXAMINER <i>Sophia Vlachou</i>	DATE CONSIDERED 6/15/2005
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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
SV	6,331,837	12/2001	Shattil				
	6,349,219	02/2002	Hochwald et al.				
	6,351,499	02/2002	Paulraj et al.				
	6,362,781	03/2002	Thomas et al.				
	6,369,758	04/2002	Zhang				
	6,370,182	04/2002	Bierly et al.				
	6,377,631	04/2002	Raleigh				
	6,377,636	04/2002	Paulraj et al.				
	6,377,819	04/2002	Gesbert et al.				
	6,400,699	06/2002	Airy et al.				
	6,400,780	06/2002	Rashid-Farrokh et al.				
	6,442,214	08/2002	Boleskei et al.				
	6,462,709	10/2002	Choi				
	6,463,295	10/2002	Yun				
	6,473,467	10/2002	Wallace et al.				
	6,522,898	02/2003	Kohno et al.				
	6,549,786	04/2003	Cheung				
	6,570,929	05/2003	Eriksson				
	6,584,161	06/2003	Hottinen				
	6,636,568	10/2003	Kadous				
	6,646,600	11/2003	Vail et al.				
	6,684,064	01/2004	Kazakevich et al.				
	6,687,492	02/2004	Sugar et al.				
	2001/0012764	08/2001	Edwards et al.				
	2001/0015994	08/2001	Nam				
✓	2001/0046255	11/2001	Shattil				

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SV	2001/0053143	12/2001	Li et al.				
	2002/0001316	01/2002	Hornsby et al.				
	2002/0024975	02/2002	Hendler				
	2002/0034191	03/2002	Shattil				
	2002/0039884	04/2002	Raynes et al.				
	2002/0064246	05/2002	Kelkar et al.				
	2002/0067309	06/2002	Baker et al.				
	2002/0072392	06/2002	Awater et al.				
	2002/0085643	07/2002	Kitchener et al.				
	2002/0102950	08/2002	Gore et al.				
	2002/0111142	08/2002	Klimovitch				
	2002/0118781	08/2002	Thomas et al.				
	2002/0122383	09/2002	Wu et al.				
	2002/0122501	09/2002	Awater et al.				
	2002/0127978	09/2002	Khatri				
	2002/0136170	09/2002	Struhsaker				
	2002/0141355	10/2002	Struhsaker et al.				
	2002/0147032	10/2002	Yoon et al.				
	2002/0158801	10/2002	Crilly, Jr. et al.				
	2002/0159537	10/2002	Crilly, Jr.				
	2002/0172186	11/2002	Larsson				
	2002/0172269	11/2002	Xu				
	2002/0196842	12/2002	Onggosanusi et al.				
	2003/0002450	01/2003	Jalali et al.				
	2003/0022693	01/2003	Gerogiokas et al.				
	2003/0032423	02/2003	Boros et al.				
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		2003/0114108	06/2003	Frecassetti et al.			
		2003/0125090	07/2003	Zeira			
		2003/0139194	07/2003	Onggosanusi et al.			
		2003/0157954	08/2003	Medvedev et al.			
		2003/0181165	09/2003	Sugar et al.			
		2004/0072546	04/2004	Sugar et al.			
		6,862,271	03/2005	Medvedev et al.			
		6,873,606	03/2005	Agrawal et al.			
		6,940,917	09/2005	Menon et al.			
	↓		6,956,907	10/2005	Ketchum, John W.		

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		Iserte et al., "Iterative Algorithm for the Estimation of Distributed Sources Localization Parameters", SSP 2001, 11 th IEEE Workshop on Statistical Signal Processing, August 2001.	
		Vaidyanathan et al., "The Role In Lossless Systems in Modern Digital Signal Processing: A Tutorial", IEEE Transactions on Education, Vol. 32, August 1989, pp. 181-197.	
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		Golden et al., "Detection Algorithm and Initial Laboratory Results Using V-BLAST Space-Time Communication Architecture", Electronic Letters, January 7, 1999, Vol. 35, No. 1.	
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		Junqiang et al., "Spatial Multiuser Access with MIMO Smart Antennas for OFDM Systems", IEEE VTC 2001, September 2001, pp. 1553-1557.	

EXAMINER <i>Sybil V. Valdez</i>	DATE CONSIDERED 6/15/2007
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		Imer et al., "MISO Concepts for Frequency-Selective Channels", 2002 International Zurich Seminar on Broadband Communications Access, February 19-21, 2002.	
		Choi et al., "MISO CDMA Transmission with Simplified Receiver for Wireless Communication Handsets", IEEE Transactions on Communications, Vol. 49, No. 5, May 2002.	
		Meyer-Ottens, et al. "Downlink Beamforming for W-CDMA Using Feedback and Interference Estimate", March 9, 2001.	
		Yang et al., "On Joint Transmitter and Receive Optimization for Multiple-Input-Multiple-Output (MIMO) Transmission Systems", IEEE Transactions on Communications, Vol. 42, No. 12, December 1994.	
		Ivrlac et al., "On Channel Capacity of Correlated MIMO Channels", ITG Fokusprojekt: Mobilkommunikation "Systeme mit Intelligenten Antennen", Ilmenau, 2001.	
		Chuah et al., "Capacity of Multi-Antenna Array Systems in Indoor Wireless Environment", November 1998, IEEE Globecom.	
		Wallace et al., "Experimental Characterization of the MIMO Wireless Channel: Data Acquisition and Analysis", February 27, 2002, Department of Electrical and Computer Engineering, Brigham Young University.	
1		Love et al., "Equal Gain Transmission in Multiple-Input Multiple-Output Wireless Systems", November 2002, Proceedings of IEEE Globecom, pp. 1124-1128.	

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		APPLICANT Tesfai et al	
		FILING DATE December 23, 2002	GROUP 2634
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
5		Lucent Technologies, "Lucent Technologies: Chips Poised to Bring 'BLAST' Multiple Input/Multiple Output Technology to Laptops, PDAs and Other Mobile Devices", October 16, 2002, lucent.com.	
		"Lucent's 'BLAST' Chips to Take Off in Wireless Market", EETimes.com, October 16, 2002.	
		Heath et al., "A Simple Scheme for Transmit Diversity Using Partial Channel Feedback", Signals, Systems & Computers, Conference Record of the Thirty-Second Asilomar Conference, November 1-4, 1998; vol. 2; pp. 1073-1078.	
		Chiu et al., "OFDM Receiver Design", EE225C, Fall 2000, University of California, Berkeley.	
		Wolniansky et al., "V-BLAST: An Architecture for Realizing Very High Data Rates Over the Rich-Scattering Wireless Channel", Proc. ISSSE-98, Pisa, Italy, September 29, 1998.	
		Sanchez et al., "CSMA/CA Beam Forming Antennas in Multi-hop Packet Radio"; Proc. For Swedish Workshop on Wireless Ad-Hoc Networks, March 5-6, 2001.	

EXAMINER <i>Sophia Vlahos</i>	DATE CONSIDERED 6/18/2007
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